

## THE PREVENTION OF DISEASE—ITS PRESENT NEED.\*

By F. M. BRUNER, M. D., Santa Ana.

**H**AVE no apology to offer for the presentation of a paper upon this subject, when a glance at the annual reports of the various state boards of health show such a large percentage of deaths from diseases generally acknowledged as preventable. Of all the states and territories of the United States to which I sent the following inquiry, "Have you any laws upon the statute books of your state for the prevention of disease?" I received 36 replies, 33 yes, and 3 no—Idaho, Nevada and Delaware. The large majority of the states have excellent laws for the control of the spread of contagious diseases, also for the prevention of disease; none, however, have any law making sanitary science and hygiene a part of the educational system of the state, or provision for the institution of a gymnasium as a part of their educational system. The need of some law directing special attention to the prevention of disease is not a new thought; indeed, the need of to-day is not something new, but to have our attention called to the things we have forgotten.

Moses in the Book of Leviticus, has left the world a heritage upon the prevention of disease that has never been equaled by any civilized nation of the world up to the present time, and I feel safe in saying will never be surpassed in the future. The mandate from Jehovah to Moses was, "Speak unto Aaron, the high priest, and his sons, that they may teach the people concerning these my laws"; then follows most complete and specific instruction as to the detailed management of the diseases of those times, not only as regards the individual, but also the care of clothing, houses and persons with whom the afflicted one may come in contact. The point to which I wish to call attention is, the teaching of the people, the coming into personal contact of the teacher with the people. Under the beneficent influence of such teachings, Israel remained free from all epidemics of disease and grew to be the mightiest nation of those times; thus do we get a hint from the past as to the methods best to pursue in the present and for the future.

Disease is prevented in two ways, by legislation and by education. One compels man to keep well, the other creates in man a desire to keep well. One is operative during periods of danger only, the other is operative at all times. One is operative through a sense of self-preservation, the other is operative through a sense of the moral obligation that "I am my brother's keeper."

Since society is as yet in the kindergarten stage of her moral development, both methods referred to are necessary to prevent the spread of disease. Since the world is not ready for the practical application of the universal brotherhood idea, and the "big stick" is the acknowledged deterrent influence in our social life, laws are necessary and needed in every state in the union.

I desire to urge the necessity for going further and paying more attention to education; correct the errors that exist, before harm has been done. If the religious educators can inculcate their religious beliefs into the mind of the child, so that by the time the age of 14 has been reached, their doctrines have become so firmly rooted in the mind that the life will be influenced and controlled by them, then we, as educators along other lines, just as essential to the well being of humanity here, if not hereafter, should accept the hint and profit by the experience of these teachers.

The healthy body is the only fit receptacle for the mind. Indeed, the healthy body is absolutely essential for the development of a healthy mind; educate and keep eternally at it. In our medical colleges, universities and public schools, by such measures raise

the standard of living to a higher level, in the minds of the people; create a desire for a wholesome life, both moral and physical, and then there will be no difficulty in having the laws observed. Bring all the influence we can, legitimately, upon legislation, and have enacted laws broad enough and deep enough to meet the needs of to-day and provide for the future.

The educational system of California in the public school is under the control of the State University. That institution's policy with regard to the public school seems to be, cram, cram the mind, and then cram some more, to the almost total neglect of development of the body. The object of the public school is not, I maintain, to produce solely a mentally developed citizen; it is rather to develop the fully rounded man and woman by fitting them both mentally and physically for the duties of life which lie beyond the portals of the high school. The tendency of the time is toward the intellectual at the expense of the physical development, the cramming and forcing of the students of our common and high schools, is one of the most potent factors in the production of the mental wrecks among our young people.

The nations of the world which have strewn the pathway of the march of civilization and intellectual development have failed not because their task was accomplished in the plan of the Creator, but because of the violation of those laws of health which are the only passport to a nation for perpetual existence. Violation of law means death; it is the law universal which all must take into account sooner or later.

The machinist who builds an engine with a view to speed alone will probably attain his object, but at what a cost? Time, money, life, all sacrificed. Why? Because the engine had no strength, no durability; so with the man who develops his mind and neglects his body. If it is the object of our educational system to produce mentally brilliant students, it will attain its object, but at the expense of strength and endurance.

In the past the nations which were the intellectual and educational centers of the world, by neglecting the physical development of the body, became effeminate and weak, and were supplanted by new blood from the hardy, rugged, barbarians of the north.

To-day the trades and professions are crowded with physically incompetent men and women, made so by the unsanitary environment of their homes; the remedy is a better understanding of scientific sanitation, the building of tenement houses in our large cities upon different plans than those now in vogue, limit population of our cities within a given area, allow only the building of detached houses; for tenements, multiplication of public parks; no resident of a city, no matter how poor, should be beyond the reach of a park; no house in which there is a room into which the sun does not shine should be allowed to be built.

The hope for the future is with the young generation; we can teach them these old truths and instill into their minds the necessity for a better observance of the laws of health. Establish the gymnasium in the public schools, colleges and universities, not the adjunct to the football team that exists to-day in the most of our schools, but an institution fitted to train and develop the body, keeping ever in view the great object for which the body was created. Given this strong physical foundation, with the finished and polished superstructure, the intellect, the public school will have accomplished its purpose.

Place at the head of the gymnasium men competent to direct its work, with a medical examining board to conduct a physical examination of each child who enters the lower grades or kindergarten. With the gymnasium placed under the control of efficient men, having due recognition as a factor in the education of the young, having for its object the development of a sound, well-balanced body, fitted by years of patient toil and study to become the receptacle of a mind trained to the highest degree; not the trained athlete

\*Read at the Thirty-fifth Annual Meeting of the State Society, Riverside, April, 1905.

of to-day, having alone in view the winning of honors in the annual field day contest; such development is as ill advised and disastrous as the over mental development referred to in a foregoing paragraph.

Every child entering school should receive a thorough physical examination, before a board of examining physicians; any departure from the normal should receive the careful attention of the examining board. Each child should have a systematic course of physical training according to its individual needs, extending from the time it enters school to the day of graduation. No child should be allowed to cultivate the mind and neglect the body; a child educated according to this plan, from the kindergarten age to the completion of the high school, will be fitted to follow any avenue of usefulness that may present itself.

I admit that it will take longer to complete the course of study as it exists in our public schools to-day, but I will guarantee this, that there will be fewer scholars drop out before the completion of the high school course than do now, and as a consequence the ratio of general knowledge would be higher, and the citizenship of the country placed upon a higher level.

## TUBULAR DIARRHEA OR MEMBRANOUS COLIC.\*

By WM. H. FLINT, M. D., Santa Barbara.

HAVING recently secured a characteristic specimen from a patient suffering with this affection, the writer takes pleasure in presenting it to you, and in inviting your attention to a brief consideration of this disease of the colon, which, in some cases, also involves the small intestine, and which has been designated by various authors as mucous, fibrinous or membranous colitis. Dr. Costa, in his article in the *American Journal of the Medical Sciences* for October, 1891, called it membranous enteritis, and Woodward, in his "History of the War of the Rebellion," gave an exhaustive account of the disease, preferring the designation tubular diarrhea, originated by John Mason Lord, because it does not imply any theory regarding the pathology.

It would seem judicious that this non-committal term, or some equivalent, be firmly established in nosology, since the name colitis is an evident misnomer. This is true because the disease, when uncomplicated, is not attended by the symptoms or signs of inflammation. Nothnagel suggested the name mucous or membranous colic, which seems to be a perfectly appropriate designation. Rothman, who is quoted by Adler, in "Wood's Handbook of the Medical Sciences" (edition of 1901, p. 199), had the opportunity of making autopsies, in a number of cases of the affection, in which complicating diseases had caused the death of the patients.

In these cases he found no lesions of the intestinal mucosa, nor have other observers noted, so far as I know, the presence of blood or of pus, either in the mucous discharges, or upon the surface of the intestinal mucosa, after the discharge of the mucous fibres, shreds or tubules characteristic of this disease. Osler states, in his article on this subject, in his "Practice of Medicine," that he has twice seen, in autopsies, mucous masses adherent to the mucosa of the colon, but capable of separation without lesion of the mucous membrane.

The etiology of this complaint is not thoroughly understood. A predisposing factor, of notable importance, seems, however, to be an exhausted and irritable nervous system. The victims of the disease, in the writer's experience, are almost always neurasthenic women, weakly children or men with notably neurotic antecedents, and generally of feeble physique.

There seems to be a reciprocal relation between the disease and neurasthenia, the one intensifying the other. Most of the authorities which the writer has

been able to consult state that a very large majority of the patients affected by this disease are women, and these observers maintain that it should be classed among the neuroses, with which conclusion the writer is in perfect accord. In his opinion the excessive production of mucus might, perhaps, be determined by the occurrence of angio-neurotic edema of the intestinal mucosa. In angio-neurotic edema of the superficial tissues, we see a sudden, unaccountable swelling of the parts affected, occurring at irregular intervals and without known cause, while, in certain neurotic individuals, localized perspirations are not uncommon. May not, then, the exaggerated function of the intestinal mucous follicles be excited by some similar temporary and periodical vaso-motor irregularity, analogous to that of superficial angio-neurotic edema or to that which, in hysterical patients, causes the secretion of abnormally abundant and limpid urine?

Little is definitely known about the exciting causes of membranous colic, although patients often attribute the origin of their trouble to dietetic indiscretions. It would seem reasonable to suppose that rough, harsh and irritating foods, such as seeds of small fruits, or the hulls of vegetables, such as corn and beans, might provoke such an irritation of the intestinal mucous membrane as to precipitate an attack. The writer has chanced to see a number of cases developed during or soon after an attack of epidemic influenza. The writer's patients have almost without exception, suffered from constipation for some time before the initial attacks, which fact causes him to infer the caustic influence of hardened fecal masses in the colon.

Symptoms. The pathognomonic clinical feature of this disease is the intermittent passage of tenacious mucous flakes, shreds, casts, balls, clumps, rolls, ropes or tubes, varying in length from a fraction of an inch to a foot or more, preceded and accompanied by gripping abdominal pains, which cease for a time after the expulsion of the mucous masses.

Nausea often exists during the attack, with some tenderness over the colon. The abdomen is usually not tympanitic. The discharges are often composed entirely of mucus. In other cases, fecal matter, generally in small quantity, is mingled with the mucus. The pain is ordinarily colic-like in character, but is sometimes described by patients as cutting, burning or lancinating. The pain originates in the course of the colon, most frequently in the caput coli, but it often radiates into the epigastrium, the umbilical region, or down the thighs. The painful discharges are not accompanied by an abnormal rise of temperature. The duration of the interval between the attacks varies from a few hours to a number of months, during which time the patient may, in uncomplicated cases, enjoy very good health or suffer only from neurasthenic symptoms. The disease may persist for years, and the individual attacks may last intermittently for several days or weeks. The patient's general condition is, usually, well maintained, unless emaciation and prostration follow an unreasonable reduction of the diet.

The attacks of pain are not invariably accompanied by the expulsion of the characteristic mucous masses. If the disorder is associated with inflammatory or organic intestinal diseases, such as colitis, enteritis or ulceration, the symptoms of these complicating maladies persist during the intervals between the painful paroxysms. The discharges are found, upon microscopical examination, to consist of mucus un-mixed with fibrinous material, and holding a few epithelial cells or leukocytes entangled in the meshes of the mucous masses. No blood or pus occurs in simple cases, but both are found in those which complicate entero-colitis or intestinal ulceration.

I now take pleasure in presenting to the society a characteristic specimen, recently recovered from one of the writer's patients who had his initial attack of mucous colic during his convalescence from epidemic

\*Read before the Santa Barbara County Society, April, 1905.